

AMENDMENT TO THE CLAIMS

1. (currently amended): A superconducting filter apparatus comprising:

a superconducting filter that exhibits a prescribed pass-band characteristic when cooled to cryogenic temperatures;

a refrigerator for cooling said superconducting filter to cryogenic temperatures;

a pilot signal generator for generating a first and second pilot signal ~~signals having different frequencies~~ that ~~is~~ are outside said pass band and inputting said first and second pilot signal ~~signals~~ to the superconducting filter together with an antenna receive signal; and

a discriminating unit for detecting the level of each pilot, and discriminating abnormality in the refrigerator and judging an extent of the abnormality based upon the level of the first and second pilot signal ~~signals~~ contained in a signal that is output from the superconducting filter ~~and~~

~~wherein said pilot signal generator generates two pilot signals having different frequencies and inputs the pilot signals to said superconducting filter and said discriminating unit detects the level of each pilot signal and judges extent of the abnormality based upon the waveforms of each of the detected levels.~~

2-6. (cancelled)

7. (currently amended): A wireless receiving amplifier for amplifying a signal of a prescribed band in a signal received by an antenna and outputting the amplified signal, comprising:

a superconducting filter that exhibits a prescribed pass-band characteristic when cooled to cryogenic temperatures;

a low-noise amplifier connected to the output of the superconducting filter for amplifying a signal that is output from the superconducting filter;

a refrigerator for cooling said superconducting filter and low-noise amplifier to cryogenic temperatures;

a first pilot signal generator for generating a first pilot signal having a frequency that is outside said pass band and inputting said first pilot signal to the superconducting filter together with an antenna receive signal; and

a second pilot signal generator for generating a second pilot signal having a frequency that is outside said pass band and inputting said second pilot signal to the connection portion between said superconducting filter and said low-noise amplifier; and

a discriminating unit for detecting the level of the first and second pilot signals contained in a signal that is output from the low-noise amplifier and for discriminating abnormality in the refrigerator and low-noise amplifier based upon the level of the first and second pilot signal signals contained in a signal that is output from the low-noise amplifier, and

~~wherein said pilot signal generator generates two pilot signals having different frequencies and inputs the pilot signals to said superconducting filter, and said discriminating unit detects the level of each pilot signal contained in a signal that is output from the low-noise amplifier and judges extent of the abnormality based upon the waveforms of each of the detected levels.~~

8-13.(cancelled)